Beard, Sara (EPPC DEP DOW)

From: Beard, Sara (EPPC DEP DOW)
Sent: Wednesday, May 07, 2008 9:42 AM
To: 'David W Howard'
Cc: Sowder, Larry (EPPC DEP DOW); Bishop, Ross (EPPC DEP DOW)
Subject: RE: Status of KPDES Modification

David,

I located the NOI and HQAA for AM-01 that you e-mailed to me on 01-24-2008. To date, no review has been conducted on this permit. I understand that the DNR permit was issued in March 2006 and that the company is waiting to commence on work associated with AM-01.

Although review of this application can be made with what you have submitted, we will need you to send in signed copies of the NOI and HQAA before we can send it to Public Notice. I suggest that you submit Section IV (Certification) on it's own page. This will help eliminate any future delays associated with possible modifications to the HQAA.

Thank you.

Sara Beard
Kentucky Division of Water
KPDES Branch, Industrial Section
14 Reilly Road
Frankfort, KY 40601
(502) 564-3410 ext. 590

-----Original Message-----
From: David W Howard [mailto:dhoward@howardeng-geo.com]
Sent: Tuesday, May 06, 2008 10:12 AM
To: Beard, Sara (EPPC DEP DOW)
Subject: Status of KPDES Modification

Sara,

Could you check on the status of a Coal General Permit Modification that we originally submitted in Jan. of 07 and resubmitted in Jan. of 08 to add some additional discharge point to KPDES #KYG045815, KDNR #867-0434 for Cumberland River Coal Company?

Thanks,
David

Beard, Sara (EPPC DEP DOW)

From: Beard, Sara (EPPC DEP DOW)
Sent: Thursday, January 24, 2008 10:41 AM
To: 'David W Howard'
Cc: Sowder, Larry (EPPC DEP DOW); Wright, Erin (PARKS)
Subject: RE: CRCC #867-0434, Am. #1, KPDES Coal General Permit Status

David,

This permit application is not currently assigned to any of our coal permit writers for review. Furthermore, I cannot locate the application or HQAA for this facility. In order to commence review, we will need you to submit a Form NOI-CM and a Form HQAA for this site. Please let me know if you have any additional questions.

Sara Beard
Kentucky Division of Water
KPDES Branch, Industrial Section
14 Reilly Road
Frankfort, KY 40601
(502) 564-3410 ext. 590

-----Original Message-----
From: Wright, Erin (PARKS)
Sent: Thursday, January 24, 2008 9:29 AM
To: 'David W Howard'
Cc: Sowder, Larry (EPPC DEP DOW); Beard, Sara (EPPC DEP DOW)
Subject: RE: CRCC #867-0434, Am. #1, KPDES Coal General Permit Status

I am no longer with the Division of Water. I'll forward your email to Larry Sowder and Sara Beard.

Sincerely,

Erin V. Wright
Volunteer Coordinator
Kentucky Department of Parks
Phone: (502) 564-4940 Ext. 233
Fax: (502) 564-9015
Erin.Wright@ky.gov

-----Original Message-----
From: David W Howard [mailto:dhoward@howardeng-geo.com]
Sent: Monday, January 21, 2008 10:46 AM
To: Wright, Erin (PARKS)
Subject: CRCC #867-0434, Am. #1, KPDES Coal General Permit Status

Erin,

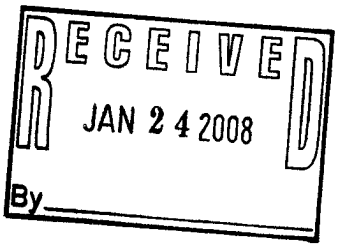
It has been some time since I contacted you regarding the above referenced application. CRCC has asked us to provide a status report on the above referenced application. Bob Lee from our office has been working with you on this application. Can you give me any update? Are you waiting on us for anything?

Thanks,
David

Howard Engineering & Geology, Inc.

[redacted]

Box 271
2550 W. Highway 72 Suite 1
Harlan, KY 40831
E-Mail: rlee@howardeng-geo.com
Phone: (606) 573-6924
Fax:606-573-9543



March 29, 2006

Industrial Section
KPDES Branch
Division of Water
Frankfort Office Park, 14 Reilly Road
Frankfort, Kentucky 40601

Subject: Cumberland River Coal Company
KPDES General Permit, Form NOI-CM
DNR No. 867-0434 AM 1

Dear Sir:

Attached please find Form NOI-CM and Form HQAA for the above referenced KPDES permit. A General Location Map on the Whitesburg 7 ½ minute, USGS topographic map and an Environmental Resources Information (ERI) map have been included. Please contact our office if you need any additional information.

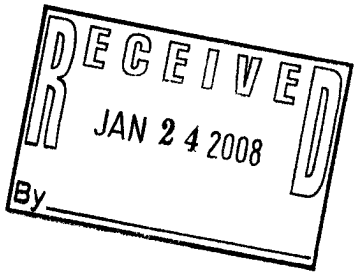
Sincerely,

Robert Lee

Howard Engineering & Geology, Inc.

[redacted]

Box 271
2550 W. Highway 72 Suite 1
Harlan, Ky 40831
E-Mail: rlee@howardeng-geo.com
Phone: (606) 573-6924
Fax:606-573-9543



July 17, 2006

Diana Davidson, KPDES Permit Writer
Industrial Section
KPDES Branch
Division of Water
Frankfort Office Park, 14 Reilly Road
Frankfort, Kentucky 40601

Subject: Cumberland River Coal Company
KPDES General Permit, Form NOI-CM
DNR No. 867-0434 AM 1

Dear Sir:

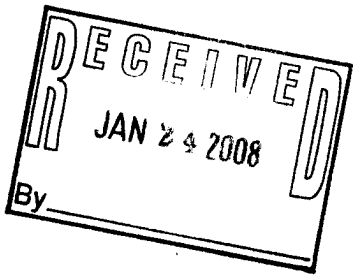
Per your telephone call on July 17, 2006 please find a corrected Form NOI-CM. Please contact our office if you need any additional information.

Sincerely,

Robert Lee

Howard HEG
Engineering & Geology, Inc.
P.O. Box 271 • 2550 W Hwy 72 Suite 1 • Harlan, Ky 40831 • Phone/Fax: (606) 573-6924 • Email: info@howardeng-geo.com

October 20, 2006



Mr. Larry Sowder, Supervisor
Division of Water, KDNR
14 Reilly Road
Frankfort, KY 40601

RE: **Cumberland River Coal Company**
KYG045815

Dear Larry:

As a follow-up to our meeting last month regarding the above referenced application for amendment to the existing KPDES Coal General Permit, we have enclosed an original and two copies of the revised HQAA including more detailed analysis. Please include this information in this application file. If you need any further information, please contact our office.

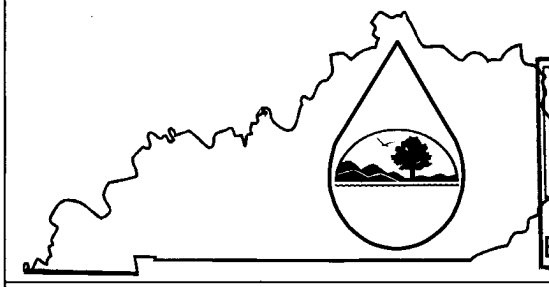
Sincerely,

David W. Howard, P.G.

c. CRCC
W:\CLIENTS\CRCC\Permits\0434\0434-Amd#1\KPDES\Cover-letter-corrections10-20-06.doc

FORM NOI-CM

KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM (KPDES)



RECEIVED
JAN 2 [illegible]
By

Permit Application for General Permit Coverage For Coal Mining Operations

This is an application for:

New mining operation coverage.
Modification of coverage for additional area in same watershed.
Modification of coverage for additional area in different watershed.
XX Previously covered by an individual permit.

In order to qualify for coverage under the *Coal General Permit*, the coal mining operation must have obtained or is obtaining a Permit Program Permit from the Department for Surface Mining Reclamation and Enforcement (DSMRE) (except those operations listed in Part III of the *Coal General Permit*).

For additional information contact:
KPDES Branch (502) 564-3410

If Modification is checked, state reason for Modification: **Amendment to Existing DNR Permit 867-0434**

For Agency Use	Permit No. (Leave Blank)	K	Y	G	0	4				
For Agency Use	AI ID (Leave Blank)									

SECTION I – PERMITTEE INFORMATION

Applicant Name:	**Cumberland River Coal Company**
Mailing Address:	**P.O. Drawer 109 Route 603, Dunbar Road**
City, State, Zip Code:	**Appalachia, VA 24216**
Contact Name:	**Thurman Holcomb**
Contact Phone Number:	Work # (**276**) **679-4937** Pager # ( ) -

SECTION II – GENERAL SITE INFORMATION

1. **Attach a full size color USGS 7½-minute quadrangle map with the facility site clearly marked. USGS maps may be obtained from the University of Kentucky, Mines and Minerals Bldg. Room 106, Lexington, Kentucky 40506. Phone number (859) 257-3896.**
2. **Attach a copy of the Mining and Reclamation Plan map and the Environmental Resources Information map.**

3. DSMRE Number: **867-0434 AM. #1**	4. Type of Operation: **Surface Mine**
5. County where facility is located: **Letcher**	6. Nearest community: **Eolia, KY**
7. Nearest public road intersection: **KY 806 with US 119**	8. Nearest named stream: **Franks Cr./Joe Day Br.**
9. Facility Site Latitude (degrees, minutes, seconds): **37° – 01' – 34"**	Facility Site Longitude (degrees, minutes, seconds): **82° – 48' – 19"**
10. Method used to obtain latitude and longitude (see instructions): **USGS Topographic Map**	
11. Surface disturbance acreage: **389.81**	12. Underground acreage: **291.92**

Number of sediment structures proposed:	**16**	(complete sediment structure inventory table on page 3)
Number of fills proposed:	**2**	(complete fill inventory table on page 4)
Number of stream crossings proposed:	**0**	(complete stream crossings inventory table on page 4)
Nearest downstream public water supply:	**Cumberland, KY**	
389.81Distance in stream miles to nearest downstream public water supply:	**Over16 miles downstream**	

(Continued on Back Page)

SECTION IV – COE CWA SECTION 404 PERMIT INFORMATION

Has a Clean Water Act Section 404 permit been obtained from the Army Corps of Engineers for any or all sediment structures, fills or stream crossings?
The original has a 404 permit, the amendment is pending

Permit Number:	Permit Issuance Date:
Activities covered by permit:	

SECTION V – OTHER ENVIRONMENTAL APPROVALS AND PERMIT INFORMATION

CATEGORY	EXISTING PERMIT WITH NUMBER	PERMIT NEEDED WITH PLANNED APPLICATION DATE
401 Water Quality Certification	N/A	
Drinking Water		
Wastewater Construction		
Water Withdrawal		
Air Emissions		
Solid or Special Wastes		
Hazardous Waste Registration /Permit		

SECTION VI – STREAM CHARACTERISTICS

This requirement applies to new operations or existing operations expanding into a new watershed. It does not apply to existing operations which are not expanding into a new watershed or when only underground acreage is being added to an existing operation.

Complete a Stream Characteristics Data Sheet (page 5) for each of three locations on each receiving stream.

SECTION VII – BEST MANAGEMENT PRACTICES (BMP) PLAN

Check one the following boxes.

XX The company wide generic Coal BMP Plan shall be implemented for this activity within 90 days of the granting of coverage under the KPDES Coal General Permit.

☐ A site specific BMP shall be developed, and implemented for this activity within 90 days of the granting of coverage under the KPDES Coal General Permit.

☐ The Oil & Grease requirements of the KPDES Coal General Permit shall be followed.

SECTION VIII – CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (Type or Print)	**Thurman Holcomb**	Telephone Number: (Area Code and Number)	**(276) 679-4937**
SIGNATURE:		DATE:	

SECTION IX – NOI PREPARER INFORMATION

Preparer Name:	**Howard Engineeing and Geology, Inc.**
Mailing Address:	**P.O. Box 271**
City, State, Zip Code:	**Harlan, Ky 40831**
Phone Number:	Home # ( ) - Work # (**606**) **573 - 6924** Pager # ( ) -

This completed application form and attachments should be sent to: KPDES Branch, Division of Water, Frankfort Office Park, 14 Reilly Road, Frankfort, Kentucky 40601. Questions should be directed to: KPDES Branch, Inventory and Data Management Section at (502) 564-3410.

Sediment Structure Inventory

ID Number	Upland/ In stream	Permanent/ Temporary	Drainage Area (acres)	Activities	Latitude (dd-mm-ss)	Longitude (dd-mm-ss)	Receiving Water (name)
61	Upland	Temporary	83.64	Surface Mining	37° – 01'-40"	82°-48'-33"	Franks Creek
62	In stream	Temporary	837.00	Surface Mining	37° – 02'-07"	82°-50'-41"	Joe Day Branch
67	Upland	Temporary	15.05	Surface Mining	37° – 01'-29"	82°-48'-55"	Franks Creek
68	Upland	Temporary	21.16	Surface Mining	37° – 01'-35"	82°-48'-55"	Franks Creek
69	Upland	Temporary	8.58	Surface Mining	37° – 01'-44"	82°-48'-01"	Franks Creek
70	Upland	Temporary	7.98	Surface Mining	37° – 01'-49"	82°-48'-54"	Franks Creek
71	Upland	Temporary	7.71	Surface Mining	37° – 01'-55"	82°-48'-46"	Franks Creek
72	Upland	Temporary	8.26	Surface Mining	37° – 01'-28"	82°-48'-40"	Franks Creek
73	Upland	Temporary	17.77	Surface Mining	37° – 01'-36"	82°-48'-48"	Franks Creek
74	Upland	Temporary	9.65	Surface Mining	37° – 01'-46"	82°-48'-49"	Franks Creek
75	Upland	Temporary	21.51	Surface Mining	37° – 01'-53"	82°-48'-39"	Franks Creek
76	Upland	Temporary	11.86	Surface Mining	37° – 01'-21"	82°-49'-34"	Joe Day Branch
77	Upland	Temporary	9.74	Surface Mining	37° – 01'-17"	82°-49'-41"	Joe Day Branch
78	Upland	Temporary	6.69	Surface Mining	37° – 01'-21"	82°-49'-52"	Joe Day Branch
79	Upland	Temporary	12.08	Surface Mining	37° – 01'-15"	82°-49'-55"	Joe Day Branch
80	Upland	Temporary	20.70	Surface Mining	37° – 01'-13"	82°-50'-04"	Joe Day Branch

Instructions

ID Number: Provide the structure's identification number.
Upland/In stream: Indicate whether the structure is on the bench, in-stream or upland.
Permanent/Temporary: Indicate whether the structure is permanent or temporary
Drainage Area: Provide the contributing drainage area in acres.
Activities: List the types of activities within the contributing drainage area, i.e; fills, haul roads, surface mines, underground mines, etc.
Latitude: Provide the latitude of the structure.
Longitude: Provide the longitude of the structure.
Receiving Stream: Name of the water body, which receives the structure's discharges.

(Attach additional pages if necessary)

(Continued on Back Page)

Fill Inventory

ID Number	Permanent/ Temporary	Fill Size (acres)	Watershed Size (acres)	Latitude (dd-mm-ss)	Longitude (dd-mm-ss)	Impacted Stream (name)
#2	Permanent	29.62	86.65	37° – 01'-41"	82°-48'-46"	Franks Creek
#3	Permanent	38.15	214.92	37° – 01'-34"	82°-49'-41"	Joe Day Branch

Instructions

ID Number:	Provide the structure's identification number.
Permanent/Temporary:	Indicate whether the fill is permanent or temporary
Size:	Provide the size of the fill in acres.
Watershed:	Provide the watershed size in acres above the lowest point of the permanent fill.
Latitude:	Provide the latitude of the fill.
Longitude:	Provide the longitude of the fill.
Impacted Stream:	Name of the water body in which the fill is being placed.

(Attach additional pages if necessary)

Stream Crossings Inventory

ID Number	Permanent/ Temporary	Stream Crossing Type	Watershed Size (acres)	Latitude (dd-mm-ss)	Longitude (dd-mm-ss)	Impacted Stream (name)
N/A						

Instructions

ID Number:	Provide the stream crossing's identification number.
Permanent/Temporary:	Indicate whether the stream crossing is permanent or temporary
Type:	Provide the type of crossing, i.e. bridge, culvert, low water, etc.
Watershed:	Provide the watershed size in acres above the stream crossing.
Latitude:	Provide the latitude of the stream crossing.
Longitude:	Provide the longitude of the stream crossing.
Impacted Stream:	Name of the water body in which the stream crossing is being placed.

(Attach additional pages if necessary)

Stream Characteristics Data Sheet

STREAM NAME: Franks Creek of the Poor Fork of the Cumberland River		**LOCATION: KY 806 intersection with US 119**	
STATION: No. 1	**MILE POINT: Franks Creek**	**Basin/Watershed: Right Fork of Franks Creek**	
LATITUDE: 37°-01'-50"	**LONGITUDE: 82°-48'-05"**	**County: Letcher**	**TOPO MAP: Whitesburg**
DATE: 7-12-05	**TIME:2:15** ☐ **AM** **X PM**	**Investigators: Robert Lee**	

WEATHER:

Now	Past 24 Hours		
☐	☐	Heavy Rain	Has there been a heavy rain in the last 7 days? X Yes No
☐	☐	Steady Rain	Air Temperature 84° F
☐	☐	Intermittent Showers	Rainfall in past 24 hours 1/2 inches
X	X	Clear/sunny	Cloud Cover 10 %

P-Chem Features: Temperature 19.38 °C pH 8.38 Standard Units Specific Conductance 473 µmho/cm

INSTREAM WATERSHED FEATURES:

Stream width: 10 ft
Range of depth: 0.33 ft
Average Velocity: 5.00 ft/s
Discharge: 16.50 cfs
Estimated Reach Length: 1500 ft

Hydraulic Structures:

☐ Dams X Bridge Abutments
☐ Island ☐ Waterfalls
☐ Other

Channel Alterations:

☐ Dredging
☐ Channelization ☐ Full ☐ Partial

Stream Flow:

☐ Dry ☐ Pooled ☐ Low X Normal
☐ High ☐ Very Rapid or Torrential

Stream Type:

X Perennial ☐ Intermittent
☐ Ephemeral ☐ Seep

LOCAL WATERSHED FEATURES:

Predominant Surrounding Land Use

X Surface Mining ☐ Construction X Forest
X Deep Mining ☐ Commercial ☐ Pasture/ Grazing
X Oil Wells ☐ Industrial ☐ Silviculture
☐ Land Disposal ☐ Row Crops ☐ Urban Runoff/ Storm Sewers

Riparian Vegetation:

Dominate Type

		Dom. Tree/Shrub Taxa
X Trees	Shrubs	Sycamore, Poplar and Maple
X Grasses	Herbaceous	

Number of strata 3

Canopy Cover:

☐ Fully Exposed (0 – 25%)
Partially Exposed (25 – 50%)
Partially Shaded (50 – 75%)
X Fully Shaded (75 – 100%)

Substrate (Estimated)	Riffle %	Run %	Pool %
Silt/Clay (<0.06 mm)	5	5	50
Sand (0.06 – 2 mm)	5	5	25
Gravel (2 – 64 mm)	5	5	15
Cobble (64 – 256)	10	10	10
Boulders (>256 mm)			
Bedrock	75	75	5

A minimum of three photographs of the receiving stream shall be provided with this data sheet. The views depicted in these pictures will include the immediate site where the discharge will enter the receiving stream, looking downstream of the immediate site, and looking upstream of the immediate site. If the NOI is being submitted as a hard copy then attach a separate sheet with the pictures attached with appropriate captioning (i.e. include stream name, latitude, longitude, and the view being presented). If the NOI is being submitted in an electronic format (CD or e-mail) attach a separate file containing the pictures with the appropriate captioning as aforementioned.

(Continued on Back Page)

Stream Characteristics Data Sheet

STREAM NAME: Joe Day Branch		LOCATION: KY 806 with US 119	
STATION: No. 3	MILE POINT: Joe Day Br. @ Poor Fork Of Cumberland River	Basin/Watershed: Left Fork of Colliers Creek.	
LATITUDE: 37°-00'-16"	LONGITUDE: 82°-51'-52"	County: Letcher	TOPO MAP: Whitesburg
DATE: 3-6-06	TIME:3:15 ☐AM X PM	Investigators: Robert Lee	

WEATHER:

Now	Past 24 Hours		
☐	☐	Heavy Rain	Has there been a heavy rain in the last 7 days? Yes No
☐	☐	Steady Rain	Air Temperature 75° F
☐	☐	Intermittent Showers	Rainfall in past 24 hours 1/8 inches
X	X	Clear/sunny	Cloud Cover 10 %

P-Chem Features: Temperature 21.50 °C pH 8.30 Standard Units Specific Conductance 470 µmho/cm

INSTREAM WATERSHED FEATURES:

Stream width: 12 ft
Range of depth: .33 ft
Average Velocity: 2.40 ft/s
Discharge: 9.50 cfs
Estimated Reach Length: 1900 ft

Hydraulic Structures:

☐ Dams ☐ Bridge Abutments
☐ Island ☐ Waterfalls
☐ Other

Channel Alterations:

☐ Dredging
X Channelization ☐ Full ☐ Partial

Stream Flow:

☐ Dry ☐ Pooled ☐ Low X Normal
☐ High ☐ Very Rapid or Torrential

Stream Type:

X Perennial ☐ Intermittent
☐ Ephemeral ☐ Seep

LOCAL WATERSHED FEATURES:

Predominant Surrounding Land Use

X Surface Mining ☐ Construction X Forest
X Deep Mining ☐ Commercial ☐ Pasture/ Grazing
X Oil Wells ☐ Industrial ☐ Silviculture
☐ Land Disposal ☐ Row Crops ☐ Urban Runoff/ Storm Sewers

Riparian Vegetation:

Dominate Type

X Trees Shrubs
X Grasses Herbaceous

Dom. Tree/Shrub Taxa
Sycamore, Poplar and Maple

Number of strata _3____

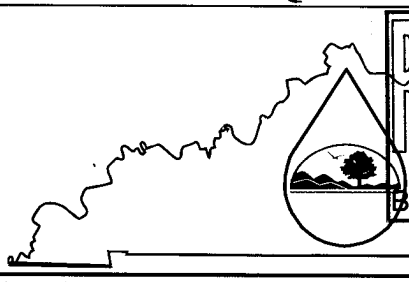
Canopy Cover:

X Fully Exposed (0 – 25%)
Partially Exposed (25 – 50%)
Partially Shaded (50 – 75%)
Fully Shaded (75 – 100%)

Substrate (Estimated)	Riffle %	Run %	Pool %
Silt/Clay (<0.06 mm)	5	5	50
Sand (0.06 – 2 mm)	10	5	25
Gravel (2 – 64 mm)	10	5	10
Cobble (64 – 256)	10	10	5
Boulders (>256 mm)			
Bedrock	65	75	10

A minimum of three photographs of the receiving stream shall be provided with this data sheet. The views depicted in these pictures will include the immediate site where the discharge will enter the receiving stream, looking downstream of the immediate site, and looking upstream of the immediate site. If the NOI is being submitted as a hard copy then attach a separate sheet with the pictures attached with appropriate captioning (i.e. include stream name, latitude, longitude, and the view being presented). If the NOI is being submitted in an electronic format (CD or e-mail) attach a separate file containing the pictures with the appropriate captioning as aforementioned.

KPDES FORM HQAA



Kentucky Pollutant Discharge Elimination System (KPDES)

High Quality Water Alternative Analysis

The Antidegradation Implementation Procedures outlined in 401 KAR 5:030, Section 1(3)(b)5 allows an applicant who does not accept the effluent limitations required by subparagraphs 2 and 3 of 5:030, Section 1(2)(b) to demonstrate to the satisfaction of the Environmental and Public Protection Cabinet that no technologically or economically feasible alternatives exist and that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the water is located. The approval of a POTW's regional facility plan pursuant to 401 KAR 5:006 shall demonstrate compliance with the alternatives analysis and socioeconomic demonstration for a regional facility. This demonstration shall also include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

I. Permit Information

Facility Name:	Cumberland River Coal Company	**KPDES NO.:**	KYG045815
Address:	P.O. Drawer 109, Route 603, Dunbar Rd.	**County:**	Letcher
City, State, Zip Code:	Appalachia, VA 24216	**Receiving Water Name:**	Joe Day Branch/Franks Creek

II. Alternatives Analysis - For each alternative below, discuss what options were considered and state why these options were not considered feasible.

1. **Discharge to other treatment facilities.** Indicate which treatment works have been considered and provide the reasons why discharge to these works is not feasible.

Existing treatment facilities, such as Pond #62 have been utilized where feasible. Existing ponds on permit numbers 867-0382 located in Franks Creek and Trace Fork and 867-5291 located in Franks Creek were also considered, however all of these ponds were eliminated due to the distance from the proposed mining area, over 1 mile and not within the natural drainage areas, and also because these particular ponds are at their maximum design capacity. A WWTP exists at the Arlie Boggs Elementary School, but was eliminated due to the cost prohibitive distance from the proposed discharges, 2.5 miles from Pond 61 and 3.6 miles from Pond #62. Another factor in deciding to eliminate this existing WWTP is that it is package WWTP which is not designed to treat sediment laden surface runoff, only sanitary sewer and only for the school. The cost to pump surface runoff to this existing WWTP is estimated to be $75/ft. including pumping stations. Given a distance of 19,008 feet from pond #62 and 13,200 feet from pond 61, the cost would be estimated at 2.4 million dollars. Pond construction costs are estimated to be $80,000 for pond 61 and $0 for pond #62 since it is existing.

2. **Use of other discharge locations.** Indicate what other discharge locations have been evaluated and the reasons why these locations are not feasible.

Other discharge locations were evaluated and in fact Pond #62 is an existing discharge location. Pond #61 could not be located any further downstream due to a property line and no further upstream due to the limit of the hollow fill. Bench ponds were designed to discharge into existing natural drains so that new disturbed channels are not created. Adjacent drainage areas are similar to the discharge drainages. Other higher quality receiving streams such as Smith Creek and Collier Creek were avoided by the mining plan to decrease the amount of environmental impact. Topography and soil conditions also limit the locations of pond construction. Pumping back to existing ponds is estimated using a distance of approximately 4,000 ft, and a cost of $75/ft is estimated to be $300,000. which far exceeds the cost to construct the pond.

II. Alternatives Analysis - continued

3. **Water reuse or recycle.** Provide information about opportunities for water reuse or recycle at this facility. If water reuse or recycle is not a feasible alternative at this facility, please indicate the reasons why.

Cumberland River Coal Company reuses approximately 20k gallons of disturbed surface water runoff from ponds daily for fugitive dust control and underground dust suppression. With a combined peak discharge during a 25 year/24 hour storm of 480.38 cubic feet per second, which equates to 310 million gallon per day. As can be seen the amount of peak discharge far exceeds the amount of reuse, therefore, the need for the discharge is evident.

4. **Alternative process or treatment options.** Indicate what process or treatment options have been evaluated and provide the reasons they were not considered feasible.

Alternative processes and treatment options considered include clarifiers, filters, anoxic limestone drains, successive alkalinity-producing systems, limestone sand dosing, limestone channels, limestone diversion wells, package treatment plant and constructed wetlands. Clarifiers and filters were eliminated due to construction, operations and maintenance costs , estimated to be 1 to 1.5 million dollars for construction and 0.25 to 0.5 million dollars per year for operations and maintenance, far exceeding pond construction and maintenance costs. Also, neither of these processes performs the flood prevention function of the pond. ALDs, SAPs, limestone sand dosing, limestone channels, limestone diversion wells are designed for Acid Mine Drainage treatment only, which this site does not exhibit and do not perform the functions of the drainage ponds, which are sediment retention and flood prevention. Also, the cost of construction, estimated to be $250,000 each and maintenance costs of $100,000 per year, far exceed the cost of construction and maintenance of pond. A small package treatment plant was considered, but at an estimated cost of construction of approximately $2 million with operations and maintenance costs of $0.5 million to $0.75 million, was eliminated due to excessive cost. Constructed wetlands were considered, but eliminated due to topography and inability to perform the functions of the drainage ponds. The cost to construct wetlands would exceed $0.5 million dollars and operations and maintenance costs are estimated to be $100,000 to $200,000 per year, exceeding the cost of pond construction and maintenance.

II. Alternatives Analysis - continued

5. **On-site or subsurface disposal options.** Discuss the potential for on-site or subsurface disposal. If these options are not feasible, then please indicate the reasons why.

Both on-site disposal into the soil and subsurface disposal into subsurface geologic formations and abandoned underground mines were evaluated. Soil information from the USDA was evaluated to determine if any soils in the area were suitable for waste water disposal in accordance with Kentucky Health Department standards. No soils in the area were suitable for waste water disposal. The Whitesburg, USGS Quadrangle was investigated for potential geologic formations suitable for subsurface injection. No formations with suitable porosity and permeability were indicated. Also, the fresh water zone is approximately 800 feet deep in valley floor areas with most residents in the area utilizing the stress-relief fracture aquifer system. Injection of waste water into this zone would adversely impact the health of local residents and would not be in accordance with EPA injection wells regulations.

6. **Evaluation of any other alternatives to lowering water quality.** Describe any other alternatives that were evaluated and provide the reasons why these alternatives were not feasible.

Other alternatives to lowering water quality were evaluated and included a no-action alternative. When evaluating the alternatives considered above in sections 1-5, versus the projected amount of lowering in water quality, no other cost effective alternative could be found to construction of ponds and acceptance of the proposed water quality limits. The no action alternative was considered and given the impacts to the local economy of Letcher County, loss of 78 local jobs and approximately $500,000 in annual severance taxes returned to Letcher County.

III. Socioeconomic Demonstration

1. State the positive and beneficial effects of this facility on the existing environment or a public health problem.

Positive and beneficial effects of this facility on the existing environment and public health include:

A. An increase in employment in Letcher County, Kentucky.

B. **An increase in tax revenues.**

C. **Reclamation of previous disturbances. The proposed project area has numerous previous disturbances including pre-law mining on the Parsons and Morris benches, underground mine discharges in the Morris seam, extensive logging, oil and gas exploration, utility line construction. Runoff from this existing disturbances is entering the receiving streams unabated, unregulated and is not being monitored. This project will treat surface runoff from all of these existing disturbances and the post mining land use will result in a decrease in uncontrolled surface runoff and an increase in wildlife habitat.**

2. Describe this facility's effect on the employment of the area

Approximately 78 people will be employed by this project. Approximately 50% are residents of Kentucky. U.S. Bureau of Labor statistics indicate that Letcher County, Kentucky had an unemployment rate of 6.6 percent in 2004 compared to 5.3 percent for the Commonwealth of Kentucky.

3. Describe how this facility will increase or avoid the decrease of area employment.

Since this application is for an amendment area to an existing surface mine, the 78 employees will be continued employment. Non-issuance of this KPDES permit will result in the layoff of these employees.

4. Describe the industrial or commercial benefits to the community, including the creation of jobs, the raising of additional revenues, the creation of new or additional tax bases.

The tax rate for coal companies is 4.5 percent and it is estimated that this project area will generate approximately $984,000 dollars in severance taxes and a total of 2.5 million dollars for the Commonwealth of Kentucky. The post-mining land use will also increase the property values by improving accessibility and usable land after mining. Indirect employment due to related goods and services is estimated to be 150.

5. Describe any other economic or social benefits to the community.

Continued operation of this mine will allow local residents to remain employed in their home county, thus maintaining their cultural heritage and reduce travel costs. Increases and continuation of community services will also be a benefit of the project due to increases and continuation of severance tax payments, employment of local citizens of Letcher County.

III. Socioeconomic Demonstration - continued

	Yes	No
6. Will this project be likely to change median household income in the county?	☒	☐
7. Will this project likely change the market value of taxable property in the county?	☒	☐
8. Will this project increase or decrease revenues in the county?	☒	☐
9. Will any public buildings be affected by this system?	☐	☒

10. How many households will be *economically* or *socially* impacted by this project? **228**

11. How will those households be *economically* or *socially* impacted? (For example, through creation of jobs, educational opportunities, or other social or economic benefits.)

The 228 households impacted are both direct and indirect. The economic impacts for this applicant are in excess of 20 million dollars in payroll, of which the directly employed 78 households will be included. Social benefits include local residents being able to stay in the home community to earn a living thus preserving their culture and heritage. The unemployment rate for Letcher County in 2004 was 6.6 percent compared to 5.3 for Kentucky and 5.5 for the United States. Therefore, continued employment of residents of Letcher County is vital to the economic and social structure of this small county. The population of Letcher County during the 2000 census was 25,277, compared to 27,000 in 1990 and 30,687 in 1980, indicating a downward trend in population and employment.

	Yes	No
12. Does this project replace any other methods of sewage treatment to existing facilities? (If so describe how)	☐	☒

	Yes	No
13. Does this project treat any existing sources of pollution more effectively? (If so describe how.)	☒	☐

Approximately 245.43 acres of the 389.81 acres being proposed by this amendment were

previously disturbed by pre-law mining. The surface runoff from this 245.43 acres of un-reclaimed mining areas currently discharges into the receiving streams untreated and unmonitored. As the result of this project all of the runoff from the 389.81 acres will be treated and monitoring. Other disturbances that will be remediated include oil and gas exploration and logging disturbances.

III. Socioeconomic Demonstration - continued

	Yes	No
14. Does this project eliminate any other sources of discharge or pollutants? (If so describe how.)	☒	☐

This project will eliminate discharge from 245.43 acres of previously disturbed, pre-law mining areas located on the Parsons and Lowsplint benches. These disturbances were mined pre-law with little to no reclamation. Natural vegetation has partially reclaimed these areas. The proposed project will involve remining of these areas and reclaiming them to current regulatory standards with very little erosion or poor water quality runoff. Existing oil and gas exploration pipeline construction running from Franks Creek into Colliers Creek has created erosion which will also be eliminated within the mining area above the Parsons seam up to above the Highsplint seam. Existing logging operations within the mining area above the Lowsplint bench, have also created erosion which will be eliminated by mining and reclamation.

15. How will the increase in production levels positively affect the socioeconomic condition of the area?

The proposed amendment project area will generate approximately $984,000 dollars in severance taxes and a total revenue of 2.5 million dollars for the Commonwealth of Kentucky. Increases in production levels such as proposed by this project will create more jobs. Production levels in small eastern Kentucky counties like Letcher County are directly related to employment rates and economic prosperity of the local governments. Production in Letcher County doubled from 1980 to 1990, 5 million to 10 million, The median income in Letcher County in 2000 was $21,110 compared to an average income of $39,067.60 for coal miners in Kentucky.

16. How will the increase in operational efficiency positively affect the socioeconomic condition of the area?

Operational efficiency increases will have a positive affect on the socioeconomic conditions of the area by remediating existing sources of pollution, implementing best management practices, minimizing disturbances during mining phases, adhering to the contemporaneous reclamation requirements and providing a higher and better post mining land use.

IV Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	**Gaither Frazier, General Manager**	**Telephone No.:**	(276)679- 4937
Signature:		**Date:**	

Kentucky Pollutant Discharge Elimination System (KPDES)
Instructions
KPDES Permit Application Supplemental Information

SECTION I – PERMITTEE INFORMATION

Facility Name:	Provide the name of the facility
Mailing Address, City, State, and Zip Code:	Provide the mailing address
KPDES No.:	Provide the KPDES permit number for the facility
County:	Indicate the county in which the facility is located
Receiving Water Name:	Indicate the water body into which the facility discharges or plans to discharge.

SECTION II – Alternatives Analysis

For each item, provide a synopsis of the evaluations that were performed. A successful demonstration will provide justifications as to why these alternatives were not consider viable.

Include appropriate supporting documentation.

SECTION III – Socioeconomic Demonstration

Answer yes or no as appropriate. Where indicated, provide a synopsis of the positive economic impacts that will result from this project. A successful demonstration will show why the lowering of water quality is necessary to accommodate important economic or social development in the area.

Include appropriate supporting documentation.

SECTION IV - CERTIFICATION

Name and Title:	Indicate the name and title of the person signing the form.
Telephone No.:	Provide the telephone number of the person signing the form.
Date:	Indicate the date that the form was signed.

This form is part of the permit application and must be signed as follows:

Corporation: by a principal executive officer of at least the level of vice president
Partnership or sole proprietorship: by a general partner or the proprietor respectively